

## Product datasheet for SC118736

### Laminin beta 2 (LAMB2) (NM\_002292) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin beta 2 (LAMB2) (NM_002292) Human Untagged Clone
Tag:	Tag Free
Symbol:	Laminin beta 2
Synonyms:	LAMS; NPHS5
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL6</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC118736 sequence for NM_002292 edited (data generated by NextGen Sequencing)

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Clone variation with respect to NM\_002292.3

**5' Read Nucleotide  
Sequence:**

>OriGene 5' read for NM\_002292 unedited  
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AGCAGACTTGGCCGCCCTGGCATGTGTACCGATATTTCTATGACTGTGGGGCTGACT  
TCCCAGGAGTCCACTAGCCCCACGACTGGATGAAGGTATCCTGGGAGTCCGCTCTCAGA  
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**3' Read Nucleotide  
Sequence:**

>OriGene 3' read for NM\_002292 unedited  
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CACACTGGTTTTATTGGGGGCCCTGCCGGCCAAGAGCTTTCAGTGCATAGGCAGACATG  
CATGTGGGGCAGTGTAGGAACTGGGGTAGGCCCTGGGCAGGGGTCAGTGCAGGTGTTG  
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CAGATTGCATCCCCATTTGCCAGGTTTCGGAATCCCTTTGAAATACACCCCCAGGGG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002292

<b>Insert Size:</b>	6000 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li> </ol>
<b>RefSeq:</b>	<u>NM_002292.2, NP_002283.2</u>
<b>RefSeq Size:</b>	5815 bp
<b>RefSeq ORF:</b>	5397 bp
<b>Locus ID:</b>	3913
<b>UniProt ID:</b>	<u>P55268</u>
<b>Cytogenetics:</b>	3p21.31
<b>Domains:</b>	EGF_Lam, laminin_Nterm
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer

**Gene Summary:**

Laminins, a family of extracellular matrix glycoproteins, are the major noncollagenous constituent of basement membranes. They have been implicated in a wide variety of biological processes including cell adhesion, differentiation, migration, signaling, neurite outgrowth and metastasis. Laminins, composed of 3 non identical chains: laminin alpha, beta and gamma (formerly A, B1, and B2, respectively), form a cruciform structure consisting of 3 short arms, each formed by a different chain, and a long arm composed of all 3 chains. Each laminin chain is a multidomain protein encoded by a distinct gene. Several isoforms of each chain have been described. Different alpha, beta and gamma chain isomers combine to give rise to different heterotrimeric laminin isoforms which are designated by Arabic numerals in the order of their discovery, i.e. alpha1beta1gamma1 heterotrimer is laminin 1. The biological functions of the different chains and trimer molecules are largely unknown, but some of the chains have been shown to differ with respect to their tissue distribution, presumably reflecting diverse functions in vivo. This gene encodes the beta chain isoform laminin, beta 2. The beta 2 chain contains the 7 structural domains typical of beta chains of laminin, including the short alpha region. However, unlike beta 1 chain, beta 2 has a more restricted tissue distribution. It is enriched in the basement membrane of muscles at the neuromuscular junctions, kidney glomerulus and vascular smooth muscle. Transgenic mice in which the beta 2 chain gene was inactivated by homologous recombination, showed defects in the maturation of neuromuscular junctions and impairment of glomerular filtration. Alternative splicing involving a non consensus 5' splice site (gc) in the 5' UTR of this gene has been reported. It was suggested that inefficient splicing of this first intron, which does not change the protein sequence, results in a greater abundance of the unspliced form of the transcript than the spliced form. The full-length nature of the spliced transcript is not known. [provided by RefSeq, Aug 2011]